

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1654MCG

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 DEC 21 IPC search and display fields enhanced in CA/CAPLUS with the
IPC reform
NEWS 4 DEC 23 New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
USPAT2
NEWS 5 JAN 13 IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS 6 JAN 13 New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
INPADOC
NEWS 7 JAN 17 Pre-1988 INPI data added to MARPAT
NEWS 8 JAN 17 IPC 8 in the WPI family of databases including WPIFV
NEWS 9 JAN 30 Saved answer limit increased
NEWS 10 JAN 31 Monthly current-awareness alert (SDI) frequency
added to TULSA
NEWS 11 FEB 21 STN AnaVist, Version 1.1, lets you share your STN AnaVist
visualization results
NEWS 12 FEB 22 Status of current WO (PCT) information on STN
NEWS 13 FEB 22 The IPC thesaurus added to additional patent databases on STN
NEWS 14 FEB 22 Updates in EPFULL; IPC 8 enhancements added
NEWS 15 FEB 27 New STN AnaVist pricing effective March 1, 2006
NEWS 16 FEB 28 MEDLINE/LMEDLINE reload improves functionality
NEWS 17 FEB 28 TOXCENTER reloaded with enhancements
NEWS 18 FEB 28 REGISTRY/ZREGISTRY enhanced with more experimental spectral
property data
NEWS 19 MAR 01 INSPEC reloaded and enhanced
NEWS 20 MAR 03 Updates in PATDPA; addition of IPC 8 data without attributes
NEWS 21 MAR 08 X.25 communication option no longer available after June 2006

NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
<http://download.cas.org/express/v8.0-Discover/>

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:34:56 ON 21 MAR 2006

=> reactive (3A) chromatography
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
Some commands only work in certain files. For example, the EXPAND
command can only be used to look at the index in a file which has an
index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of
commands which can be used in this file.

=> file biosis embase medline caplus		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'BIOSIS' ENTERED AT 13:35:21 ON 21 MAR 2006
Copyright (c) 2006 The Thomson Corporation

FILE 'EMBASE' ENTERED AT 13:35:21 ON 21 MAR 2006
Copyright (c) 2006 Elsevier B.V. All rights reserved.

FILE 'MEDLINE' ENTERED AT 13:35:21 ON 21 MAR 2006

FILE 'CAPLUS' ENTERED AT 13:35:21 ON 21 MAR 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> reactive (3A) chromatography
L1 490 REACTIVE (3A) CHROMATOGRAPHY

=> nucleophilic or nucleophile
L2 38449 NUCLEOPHILIC OR NUCLEOPHILE

=> 12 (3a) chromatography
L3 2 L2 (3A) CHROMATOGRAPHY

=> 11 or 12
L4 38938 L1 OR L2

=> glycosylation or glycosylated or glycopeptide or glycoprotein
L5 625563 GLYCOSYLATION OR GLYCOSYLATED OR GLYCOPEPTIDE OR GLYCOPROTEIN

=> 14 and 15
L6 576 L4 AND L5

=> dup rem 16
PROCESSING COMPLETED FOR L6
L7 317 DUP REM L6 (259 DUPLICATES REMOVED)

=> glycosylation or glycosylated or glycopeptide or glycoprotein
L8 671919 GLYCOSYLATION OR GLYCOSYLATED OR GLYCOPEPTIDE OR GLYCOPROTEIN

=> 14 (3A) 18
L9 19 L4 (3A) L8

=> dup rem 19
PROCESSING COMPLETED FOR L9
L10 16 DUP REM L9 (3 DUPLICATES REMOVED)

=> d ibib abs total

L10 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:226893 CAPLUS
TITLE: Sulfoxide covalent catalysis: Application to
glycosidic bond formation
AUTHOR(S): Boebel, Timothy A.; Gin, David Y.

CORPORATE SOURCE: Department of Chemistry, University of Illinois at
Urbana Champaign, Urbana, IL, 61801, USA
SOURCE: Abstracts of Papers, 227th ACS National Meeting,
Anaheim, CA, United States, March 28-April 1, 2004
(2004), ORGN-021. American Chemical Society:
Washington, D. C.
CODEN: 69FGKM

DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English

AB The process of sulfoxide covalent catalysis is established in the context
of a versatile dehydrative glycosylation reaction. Hemiacetal donors (1)
are activated by benzenesulfonic anhydride and a dialkyl sulfoxide
catalyst, n-Bu₂SO, for the direct **glycosylation** of various
nucleophiles (Nu-H). The sulfoxide catalyst functions uniquely in
three capacities: first as an O-nucleophile, then as a S⁺-electrophile,
and finally as a leaving group to accomplish turnover.

L10 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:437856 CAPLUS
DOCUMENT NUMBER: 139:337572
TITLE: Phthalimidomethylation of O-nucleophiles with
O-phthalimidomethyl trichloroacetimidate: A powerful
imidomethylating agent for O-protection

AUTHOR(S): Ali, Ibrahim A. I.; Abdel-Rahman, Adel A.-H.; El
Ashry, H. El Sayed; Schmidt, Richard R.

CORPORATE SOURCE: Department of Chemistry, University of Konstanz,
Konstanz, 78457, Germany

SOURCE: Synthesis (2003), (7), 1065-1070
CODEN: SYNTBF; ISSN: 0039-7881

PUBLISHER: Georg Thieme Verlag

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:337572

AB The reaction of 2-(hydroxymethyl)-1H-isoindole-1,3(2H)-dione with
trichloroacetonitrile gave 2,2,2-trichloroacetimidic acid
(1,3-dioxo-2H-isoindol-2-yl)methyl ester. Phthalimidomethylation of
oxygen nucleophiles by using O-phthalimidomethyl (Pim)
trichloroacetimidate in the presence of TMSOTf has been achieved in high
yields. Hydrazinolysis of the phthalimido group from the O-derivs. leads
to the hydroxy precursors. Thus a convenient method for the protection of
oxygen nucleophiles is provided, which complements the repertoire of
available hydroxy protecting groups.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:456091 CAPLUS

DOCUMENT NUMBER: 137:201497

TITLE: Stereoselective synthesis of pseudoglycal C-glycosides
via trichloroacetimidate activation of glycals

AUTHOR(S): Abdel-Rahman, Adel A.-H.; Takhi, Mohamed; El Sayed, H.
El Ashry; Schmidt, Richard R.

CORPORATE SOURCE: Department of Chemistry, University of Konstanz,
Konstanz, D-78457, Germany

SOURCE: Journal of Carbohydrate Chemistry (2002), 21(1 & 2),
113-122

CODEN: JCACDM; ISSN: 0732-8303

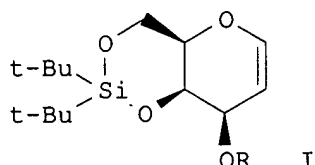
PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 137:201497

GI



AB A variety of functionalized pseudoglycal C-glycosides (C-pseudoglycals or C-hex-2-enopyranosides) have been obtained in excellent yield and stereoselectivity from the trimethylsilyl triflate (Me₃SiOTf) catalyzed reaction of I (R = trichloroacetimidate) with silylated nucleophiles such as allyl and propargyl silanes and silyl enol ethers.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:417817 CAPLUS

DOCUMENT NUMBER: 135:180908

TITLE: Stereoselective 2-deoxy-β-O-glycoside synthesis based on remote activation of novel oxathiine donors
AUTHOR(S): Bartolozzi, Alessandra; Capozzi, Giuseppe; Menichetti, Stefano; Nativi, Cristina

CORPORATE SOURCE: Centro CNR "Chimica dei Composti Eterociclici", Dipartimento di Chimica Organica, Università di Firenze, Florence, 50121, Italy

SOURCE: European Journal of Organic Chemistry (2001), (11), 2083-2090

CODEN: EJOCFK; ISSN: 1434-193X

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:180908

AB Stable glyco-fused 1,4-oxathiine derivs., prepared by inverse electron-demand Diels-Alder reactions between suitable 1-glycals and 3-thioxopentane-2,4-dione, have been transformed into unusual glycosyl donors which, after "remote activation", react efficiently with glycosyl acceptors to afford 2-thio-β-O-glycosides with total stereoselectivity. Several O-nucleophiles were successfully **glycosylated**. Reductive removal of sulfur transformed the 2-thio-β-O-glycosides into the corresponding 2-deoxy-β-O-glycosides without affecting the stereochem. of the anomeric carbon atom.

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:881188 CAPLUS

DOCUMENT NUMBER: 134:25335

TITLE: Chromatographic determination of P-glycoprotein-reactive ligands

INVENTOR(S): Wainer, Irving; Zhang, Yanxiao

PATENT ASSIGNEE(S): Georgetown University, USA

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
WO 2000075179	A1	20001214	WO 2000-US15820	20000609
W: CA, JP, US				

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
PT, SE

CA 2376825 AA 20001214 CA 2000-2376825 20000609
EP 1181311 A1 20020227 EP 2000-939704 20000609

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI

PRIORITY APPLN. INFO.: US 1999-151402P P 19990609
WO 2000-US15820 W 20000609

AB A flow chromatog. system with P-glycoprotein immobilized thereto is used
in a method of identifying, isolating, and characterizing ligands that are
reactive to P-glycoprotein.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:544755 CAPLUS

DOCUMENT NUMBER: 135:273128

TITLE: A mechanistic study: nucleophile dependence in
glucosylation with glucosyl bromides

AUTHOR(S): Bowden, Tim; Garegg, Per J.; Maloisel, Jean-Luc;
Konradsson, Peter

CORPORATE SOURCE: Department of Organic Chemistry, Arrhenius Laboratory,
Stockholm University, Stockholm, SE-106 91, Swed.

SOURCE: Israel Journal of Chemistry (2000), 40(3-4), 271-277

CODEN: ISJCAT; ISSN: 0021-2148

PUBLISHER: Laser Pages Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:273128

AB Glycosylation using glucosyl bromides and various promoters (Et₄NBr,
HgBr₂, or AgOTf) were investigated, competitively and kinetically. The
reactions were found to be dependent in both glucosyl bromide and
nucleophilic concentration, indicating a SN₂-type rate, determining step. For
the
AgOTf promoted reaction an ion pair mechanism involving glucosyl triflates
is suggested.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:663280 CAPLUS

DOCUMENT NUMBER: 127:293482

TITLE: An efficient method for catalytic and stereoselective
synthesis of 2-deoxy- α -D-glucopyranosides from
3,4,6-tri-O-benzyl-2-deoxy-D-glucopyranose and several
alcoholic nucleophiles

AUTHOR(S): Takeuchi, Kazuya; Higuchi, Satoshi; Mukaiyama, Teruaki

CORPORATE SOURCE: Department of Applied Chemistry, Faculty of Science,
Science University of Tokyo, Kagurazaka, 162, Japan

SOURCE: Chemistry Letters (1997), (10), 969-970

CODEN: CMLTAG; ISSN: 0366-7022

PUBLISHER: Chemical Society of Japan

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:293482

AB Several 2-deoxy- α -D-glucopyranosides are stereoselectively
synthesized in high yields by **glycosylation** of various alc.
nucleophiles with 3,4,6-tri-O-benzyl-2-deoxy-glucopyranose using a
catalytic amount of trityl tetrakis(pentafluorophenyl)borate.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:259102 CAPLUS

DOCUMENT NUMBER: 126:305734

TITLE: Highly stereoselective synthesis of
2'-deoxy- α -ribonucleosides and
2-deoxy- α -C-ribofuranosides by remote
stereocontrolled glycosylation

AUTHOR(S): Mukaiyama, Teruaki; Ishikawa, Tatsuya; Uchiro, Hiromi

CORPORATE SOURCE: Dep. Applied Chem., Sci. Univ. Tokyo, Tokyo, 162,
Japan

SOURCE: Chemistry Letters (1997), (4), 389-390
CODEN: CMLTAG; ISSN: 0366-7022

PUBLISHER: Nippon Kagakkai

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 126:305734

AB A new and efficient method for catalytic highly α -selective N- and
C-glycosylations of 2-deoxyribose derivative with various trimethylsilylated
nucleophiles was successfully developed by utilizing effective remote
stereocontrol with 5-O-diethylthio carbamoyl directing group. Several
2'-deoxy- α -ribonucleosides and precursors of its C-analogs were
prepared in good yields with high stereoselectivities.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:605883 CAPLUS

DOCUMENT NUMBER: 121:205883

TITLE: Synthesis of C-glycosylated compounds using a mild,
iodine-catalyzed reaction

INVENTOR(S): Koreeda, Masato; Houston, Todd A.

PATENT ASSIGNEE(S): University of Michigan, USA

SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

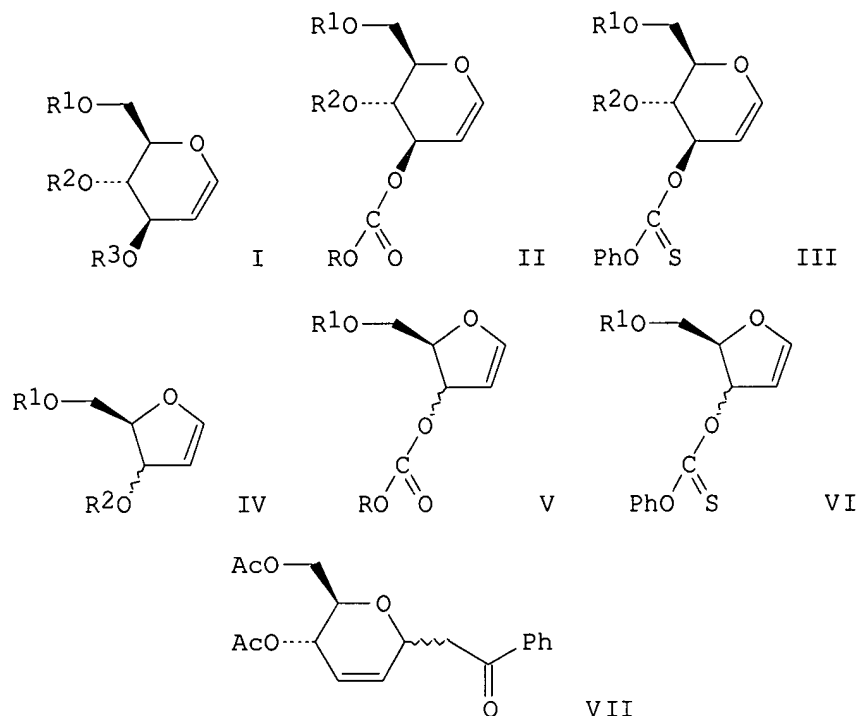
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 9407899	A1	19940414	WO 1993-US9037	19930923
W: CA, JP				
RW: AT, BE, CH,	DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
US 5414074	A	19950509	US 1992-951529	19920925
PRIORITY APPLN. INFO.:			US 1992-951529	A 19920925
OTHER SOURCE(S):	CASREACT 121:205883; MARPAT 121:205883			

GI



AB C1 α - and C1 β -glycosides were prepared from soft carbon nucleophiles and glycals (I-VI; R = alkyl; R1-R3 = aliphatic or aromatic acyl) in the presence of catalytic iodine. Thus, triacetyl D-glucal and cat. iodine in THF at -50° were treated with acetophenone trimethylsilyl enol ether and the mixture was allowed to warm to room temperature over 12 h to give 78% title compound VII as a 2.7:1 mixture of α/β epimers.

L10 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:265819 CAPLUS

DOCUMENT NUMBER: 122:106272

TITLE: A new method for the glycosylation of 1-hydroxyl sugars: Use of methoxyacetic acid and ytterbium(III) trifluoromethanesulfonate as catalytic promoters

AUTHOR(S): Yokoyama, Y.; Hanamoto, T.; Inanaga, J.

CORPORATE SOURCE: Institute Molecular Science, Okazaki, 444, Japan

SOURCE: Kidorui (1993), 22, 46-7

CODEN: KIDOEP; ISSN: 0910-2205

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB O-Protected 1-hydroxyl sugars are effectively cross-coupled with a variety of alcs. and thiols to give the corresponding glycosides by using a catalytic amount of methoxyacetic acid and ytterbium(III) trifluoromethanesulfonate [Yb(OTf)₃].

L10 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:265817 CAPLUS

DOCUMENT NUMBER: 122:106271

TITLE: New glycosylation using lanthanoid(III) complex catalysts

AUTHOR(S): Yokoyama, Y.; Hanamoto, T.; Inanaga, J.

CORPORATE SOURCE: Institute Molecular Science, Okazaki, 444, Japan

SOURCE: Kidorui (1993), 22, 42-3

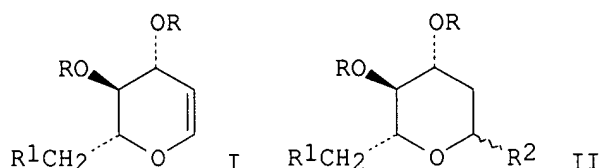
CODEN: KIDOEP; ISSN: 0910-2205

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB In the presence of a catalytic amount of lanthanoid(III) complex such as Tb(OTf)₃, Ho(OTf)₃, Tm(OTf)₃ or Yb(OTf)₃, 1-O-methoxyacetyl sugars react with a variety of alcs. and thiols to give the corresponding glycosides in good to excellent yields.

L10 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1991:164644 CAPLUS
DOCUMENT NUMBER: 114:164644
TITLE: Direct preparation of 2-deoxy-D-glucopyranosides from glucals without Ferrier rearrangement
AUTHOR(S): Bolitt, Veronique; Mioskowski, Charles; Lee, S. G.; Falck, J. R.
CORPORATE SOURCE: Southwest. Med. Cent., Univ. Texas, Dallas, TX, 75235, USA
SOURCE: Journal of Organic Chemistry (1990), 55(23), 5812-13
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:164644
GI



AB An efficient catalytic procedure for the preparation of 2-deoxyglucosides from glucals without allylic or Ferrier rearrangement using triphenylphosphine hydrobromide and a wide variety of hydroxylic nucleophiles is described. Thus, glucals I [R = Ac, CH₂Ph, CH₂C₆H₃(OMe)_{2-3,4}, R₁ = OR, H], when treated with Ph₃PBr and EtOH, PhOH, p-ClC₆H₄OH, AcOH, or MeC₆H₄CO₂H, gave glycosides II [R = Ac, R₁ = OAc, R₂ = EtO, PhO; R = CH₂Ph, R₁ = OCH₂Ph, R₂ = p-ClC₆H₄O, AcO; R = CH₂C₆H₃(OMe)_{2-3,4}, R₁ = OCH₂C₆H₃(OMe)_{2-3,4}, R₂ = EtO, PhO, AcO, p-MeC₆H₄CO₂].

L10 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:458185 CAPLUS
DOCUMENT NUMBER: 111:58185
TITLE: Stereoselective 1,2-cis glycosylation reaction of 1-O-acetylribose with silylated nucleophiles promoted by a new catalyst system
AUTHOR(S): Mukaiyama, Teruaki; Shimpuku, Tetsuro; Takashima, Toru; Kobayashi, Shu
CORPORATE SOURCE: Fac. Sci., Sci. Univ. Tokyo, Tokyo, 162, Japan
SOURCE: Chemistry Letters (1989), (1), 145-8
CODEN: CMLTAG; ISSN: 0366-7022
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 111:58185

AB 1,2-cis-Ribofuranosides are stereoselectively prepared in high yields by the reaction of 1-O-acetyl-2,3,5-tri-O-benzyl-β-D-ribofuranose with silylated nucleophiles by the promotion of a new catalyst system, the combined use of a catalytic amount of tin(IV) chloride and tin(II) triflate with a stoichiometric amount of lithium perchlorate.

L10 ANSWER 14 OF 16 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1988:87248 BIOSIS
DOCUMENT NUMBER: PREV198885044020; BA85:44020
TITLE: 5 AZA-7-DEAZA-2'-DEOXYGUANOSINE STUDIES ON THE
DUPLICATE 1

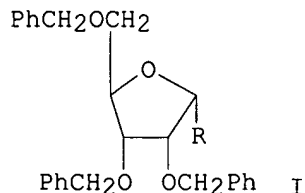
GLYCOSYLATION OF WEAKLY NUCLEOPHILIC IMIDAZO-1
2-A-S-TRIAZINYL ANIONS.

AUTHOR(S): ROSEMEYER H [Reprint author]; SEELA F
CORPORATE SOURCE: LAB ORGAN BIOORGAN CHEM, FACHBEREICH BIOL/CHEM, UNIV
OSNABRUECK, D-4500 OSNABRUECK, FRG
SOURCE: Journal of Organic Chemistry, (1987) Vol. 52, No. 23, pp.
5136-5143.
CODEN: JOCEAH. ISSN: 0022-3263.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 11 Feb 1988
Last Updated on STN: 11 Feb 1988

AB 5-Aza-7-deaza-2'-deoxyguanosine (1) has been synthesized by glycosylation of the anions of the imidazo[1,2- α]-s-triazines 3 or 4b with 2-deoxydi-O-(p-toluoyl)- α -D-erythro-pentofuranosyl chloride (7a). Glycosylation was carried out under liquid-liquid or solid-liquid phase-transfer conditions with Bu₄NHSO₄ or the cryptand TDA-1 as catalyst as well as in the presence of NaH. In contrast to the stereospecific glycosylation occurring at hard nucleophiles, glycosylation was not stereospecific in the case of weakly nucleophilic imidazo [1,2- α]-s-triazines; α - and β -anomers were formed by applying the three different glycosylation methods. Configurational as well as conformational parameters of the deoxynucleosides 1 and 2 were determined by one- and two-dimensional FT-NMR spectroscopy. Both anomeric 2'-deoxyguanosine isomers exhibit the anti conformation at the N-glycosylic bond, a predominant C-2'-endo sugar puckering, and a (-sc) conformation around the C-4'-C-5' bond.

L10 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:423236 CAPLUS
DOCUMENT NUMBER: 109:23236
TITLE: Convenient synthesis of C- α -D-ribofuranosyl compounds from 1-O-acetyl-2,3,5-tri-O-benzyl- β -D-ribose by the promotion of triphenylmethyl perchlorate
AUTHOR(S): Mukaiyama, Teruaki; Kobayashi, Shu
CORPORATE SOURCE: Fac. Sci., Univ. Tokyo, Tokyo, 113, Japan
SOURCE: Carbohydrate Research (1987), 171, 81-7
CODEN: CRBRAT; ISSN: 0008-6215
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 109:23236
GI



AB In the presence of a catalytic amount of triphenylmethyl perchlorate (trityl perchlorate), 1-O-acetyl-2,3,5-tri-O-benzyl- β -D-ribose stereoselectively reacted with trimethylsilyl nucleophiles, such as trimethylsilyl enol ether, allylsilane, and trimethylsilyl cyanide, to give the corresponding C- α -D-ribofuranosyl derivs., e.g., I (R = CH₂COCMe₃, CH₂COPh, CH₂CH:CH₂), in excellent yields. Similarly, a C- α -D-ribofuranosyl compound was obtained stereoselectively in high yield by use of a flow system with polymer-supported triphenylmethyl perchlorate, prepared from polystyrene-bound triphenylmethanol, packed in a glass-tube column.

L10 ANSWER 16 OF 16 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on
STN DUPLICATE 2

ACCESSION NUMBER: 1987:46966 BIOSIS
DOCUMENT NUMBER: PREV198783026312; BA83:26312
TITLE: CHARACTERIZATION OF OLIGOSACCHARIDES THAT BIND TO HUMAN
ANTI-MYELIN-ASSOCIATED GLYCOPROTEIN ANTIBODIES AND TO THE
MOUSE MONOCLONAL ANTIBODY HNK-1.
AUTHOR(S): SHY N E [Reprint author]; GABEL C A; VIETORISZ E C; LATOV N
CORPORATE SOURCE: COLUMBIA UNIV, COLL PHYSICIANS SURG, 630 WEST 168TH ST,
BLACK BUILD 323, NEW YORK, NY 10032, USA
SOURCE: Journal of Neuroimmunology, (1986) Vol. 12, No. 4, pp.
291-298.
CODEN: JNRIDW. ISSN: 0165-5728.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 7 Jan 1987
Last Updated on STN: 7 Jan 1987

AB In some patients with neuropathy and IgM M-proteins the M-proteins bind to a carbohydrate determinant that is shared by the CNS and PNS myelin-associated glycoprotein (MAG) and by several additional glycoproteins and 2 glycolipids in peripheral nerve. The HNK-1 mouse monoclonal antibody binds to the same glycoproteins and glycolipids as well as to a number of other neuronal adhesion molecules and to human natural killer cells. To isolate the epitope-bearing oligosaccharides from their respective glycoproteins were digested delipidated spinal cord and peripheral nerve with pronase. The resulting glycopeptides were fractionated by concanavalin A-Sepharose chromatography to yield tri- and tetraantennary-complex, biantennary-complex and high mannose-type glycopeptides. Glycopeptides bearing the antigenic determinant were identified by their higher ability to block binding of M-proteins and HNK-1 antibodies to MAG-coated microwells by enzyme-linked immunosorbent assay (ELISA). Blocking activity as detected in the tri- and tetraantennary glycopeptide fraction from both CNS and PNS. The blocking activity was destroyed by pretreatment of the isolated glycopeptides and mild acid hydrolysis. Further fractionation by gel filtration **chromatography** indicated that the **reactive glycopeptides** from peripheral nerve and spinal cord eluted in the same position. The data suggest that CNS and PNS MAG and other peripheral nerve glycoproteins share similar oligosaccharides, and that the M-proteins and HNK-1 bind to the same structures.

=>

=> d his

(FILE 'HOME' ENTERED AT 13:34:56 ON 21 MAR 2006)

FILE 'BIOSIS, EMBASE, MEDLINE, CAPLUS' ENTERED AT 13:35:21 ON 21 MAR 2006

L1 490 REACTIVE (3A) CHROMATOGRAPHY
L2 38449 NUCLEPHILIC OR NUCLEOPHILE
L3 2 L2 (3A) CHROMATOGRAPHY
L4 38938 L1 OR L2
L5 625563 GLYCOSYLATION OR GLYCOSILATED OR GLYCOPEPTIDE OR GLYCOPROTEIN
L6 576 L4 AND L5
L7 317 DUP REM L6 (259 DUPLICATES REMOVED)
L8 671919 GLYCOSYLATION OR GLYCOSYLATED OR GLYCOPEPTIDE OR GLYCOPROTEIN
L9 19 L4 (3A) L8
L10 16 DUP REM L9 (3 DUPLICATES REMOVED)

=> l1 and review

L11 10 L1 AND REVIEW

=> dup rem l11

PROCESSING COMPLETED FOR L11
L12 10 DUP REM L11 (0 DUPLICATES REMOVED)

=> d ibib abs total

L12 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1275833 CAPLUS
DOCUMENT NUMBER: 144:90249
TITLE: Process intensification by reactive carriers in
reactive extraction and -sorption
AUTHOR(S): Bart, Hans-Joerg
CORPORATE SOURCE: Lehrstuhl fuer Thermische Verfahrenstechnik, TU
Kaiserlautern, Kaiserlautern, D-67653, Germany
SOURCE: Chemie Ingenieur Technik (2005), 77(11), 1773-1783
CODEN: CITEAH; ISSN: 0009-286X
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal; General Review
LANGUAGE: German

AB A **review**. A survey on types of liquid ion exchangers (including
chiral selectors for separation of optical isomers) for use in reactive
extraction
as neat substance, in solution, in micelles and liquid membranes, and on solid
carriers is given. Aspects of selecting reactive extractants and of the
tech. realization are discussed. Reactive adsorption and chromatog.
techniques are described, including ring gap and simulated moving bed
chromatog.

REFERENCE COUNT: 69 THERE ARE 69 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1062606 CAPLUS
DOCUMENT NUMBER: 143:389061
TITLE: Integration of reaction and material separation
AUTHOR(S): Kienle, Achim; Sundmacher, Kai; Seidel-Morgenstern,
Andreas
CORPORATE SOURCE: Max-lanck-Institut fuer Dynamik komplexer technischer
Systeme, Institut fuer Automatisierungstechnik,
Otto-von-Guericke-Universitaet, Magdeburg, D-39106,
Germany
SOURCE: Chemie Ingenieur Technik (2005), 77(9), 1417-1429
CODEN: CITEAH; ISSN: 0009-286X
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal; General Review
LANGUAGE: German

AB A **review** on reactive separation processes. Potentials and
limitations of reactive distillation, membrane reactor processes, and reactive
chromatog. are described for reversible reactions under the conditions of
various separation behavior of educts and products (volatility, mass transfer,
mobility). It is pointed out that the reaction remains incomplete, if
reaction and separation compensate each other. A uniform theory of reactive
separation processes is presented which allows to predict the performance of
such processes.

REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:492478 CAPLUS
DOCUMENT NUMBER: 136:151616
TITLE: Characterization of polycarbonate branch and
crosslinking structure by **reactive** pyrolysis
gas **chromatography**
AUTHOR(S): Tsuge, Shin; Otani, Hajime; Ohba, Yoshifumi
CORPORATE SOURCE: Graduate School of Engineering, Department of Applied
Chemistry, Nagoya University, Japan
SOURCE: Kobunshi Kako (2001), 50(5), 201-208

CODEN: KOKABN; ISSN: 0023-2564
PUBLISHER: Kobunshi Kankokai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A **review** with refs. on the pyrolysis gas chromatog. (Py-GC) in the presence of tetramethylammonium hydroxide, the system structure of Py-GC, and anal. of polycarbonate branch and crosslinking structure.

L12 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:653859 CAPLUS
DOCUMENT NUMBER: 129:276562
TITLE: Characterization of synthetic high-polymers and natural organic compounds by **reactive** pyrolysis-gas **chromatography**
AUTHOR(S): Ishida, Yasuyuki; Ohtani, Hajime; Tsuge, Shin
CORPORATE SOURCE: Grad. Sch. Eng., Nagoya Univ., Nagoya, 464-8603, Japan
SOURCE: Bunseki Kagaku (1998), 47(10), 673-688
CODEN: BNSKAK; ISSN: 0525-1931
PUBLISHER: Nippon Bunseki Kagakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

AB A **review** with 31 refs. In this paper, some features of reactive pyrolysis-gas chromatog., (reactive Py-GC) in the presence of various chemical reagents, such as an organic alkali or solid acid, are first presented. Then, typical applications of the reactive Py-GC to compositional anal. and a microstructural characterization of various synthetic high-polymers and natural organic compds. are overviewed. These applications include; (1) the determination of end groups and the chemical composition of polycarbonates; (2) the determination of cationic comonomers in polyacryamide resins; (3) a study of the degradation mechanism of fully aromatic polyesters during reactive pyrolysis in the presence of an organic alkali; (4) the determination of rosin sizing agents in paper; (5) the determination of lipid components contained in a single zooplanker individual; and (6) the evaluation of sequence distributions of thermally stabilized polyacetals. All of these applications made significant contributions to opening up new practical methods to characterize the chemical composition and microstructure of engineering plastics and natural organic compds. to which conventional anal. methods often encountered various difficulties: (1) insufficient sensitivity for a trace amount of available samples weighing on the μg order, (2) the requirement of time-consuming, and loss and/or contamination-causing pretreatment of samples, and/or (3) insufficient solubility of samples in most solvents for spectroscopic measurements. Furthermore, the future scope of reactive Py-GC is briefly discussed.

L12 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:202637 CAPLUS
DOCUMENT NUMBER: 114:202637
TITLE: **Chromatography** on immobilized **reactive** dyes
AUTHOR(S): Stellwagen, Earle
CORPORATE SOURCE: Dep. Biochem., Univ. Iowa, Iowa City, IA, USA
SOURCE: Methods in Enzymology (1990), 182(Guide Protein Purif.), 343-57
CODEN: MENZAU; ISSN: 0076-6879
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A **review** with 27 refs.

L12 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:179108 CAPLUS
DOCUMENT NUMBER: 104:179108
TITLE: Gas chromatographic analysis of reactive gases
AUTHOR(S): Nitzsche, Volker; Kolditz, Lothar
CORPORATE SOURCE: Zentralinst. Anorg. Chem., Dtsch. Akad. Wiss., Berlin,
DDR-1199, Ger. Dem. Rep.
SOURCE: Zeitschrift fuer Chemie (1985), 25(10), 375-6
CODEN: ZECEAL; ISSN: 0044-2402
DOCUMENT TYPE: Journal; General Review
LANGUAGE: German
AB A **review** with 6 refs. Modifications of the metallic components
of the gas chromatograph and stationary phases, especially Porapak T, to
eliminate their interaction with the reactive gases are discussed.
Elimination of water interference is also discussed.

L12 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1985:113742 CAPLUS
DOCUMENT NUMBER: 102:113742
TITLE: **Reactive chromatography:** its
possibilities and limits
AUTHOR(S): Sardin, M.; Schweich, D.; Villermaux, J.
CORPORATE SOURCE: Lab. Sci. Genie Chim., Ec. Natl. Super. Ind. Chim.,
Nancy, Fr.
SOURCE: Informations Chimie (1984), 255, 253-5
CODEN: INFCA8; ISSN: 0020-045X
DOCUMENT TYPE: Journal; General Review
LANGUAGE: French
AB Using the transesterification of menthol with EtOAc for the preparation of
menthyl acetate as an example, reactive chromatog. for improvement of
conversion and purity of products was reviewed with 4 refs.

L12 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1984:211149 CAPLUS
DOCUMENT NUMBER: 100:211149
TITLE: Preparation of porous polymers containing functional
groups for subtraction of particular compounds in gas
chromatography
AUTHOR(S): Sugii, Atsushi
CORPORATE SOURCE: Pharma Coll., Kumamoto Univ., Japan
SOURCE: Bunseki (1984), (3), 206-10
CODEN: BUNSD3; ISSN: 0386-2178
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A **review** with 19 refs.

L12 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1969:440189 CAPLUS
DOCUMENT NUMBER: 71:40189
TITLE: **Chromatography of reactive dyes**
AUTHOR(S): Cee, Ales
CORPORATE SOURCE: Coll. Advan. Chem. Technol., Pardubice, Czech.
SOURCE: Sbornik Vedeckych Praci - Vysoka Skola
Chemickotechnologicka Pardubice (1967), No. 16(Pt. 2),
205-26
CODEN: SVPVA9; ISSN: 0553-2124
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Czech
AB A **review**. Paper and thin-layer chromatog. are very reliable for
testing the purity of dyes and determining the identity and constitution of
newly discovered dyes. Chromatog. can be used for quick determination if an
examined dye is a mixture or pure substance; also adequate reactivity or
undesirable hydrolysis during storage can be determined. Solvent systems
leading to optimal resolution are recommended for different types of
fiber-reactive dyes. 39 references.

L12 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1963:405762 CAPLUS

DOCUMENT NUMBER: 59:5762

ORIGINAL REFERENCE NO.: 59:1064g-h

TITLE: Some applications of gas chromatography in inorganic chemistry

AUTHOR(S): Phillips, C. S. G.; Timms, P. L.

CORPORATE SOURCE: Univ. Oxford, UK

SOURCE: Anal. Chem. (1963), 35, 505-10

CODEN: ANCHAM; ISSN: 0003-2700

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB Volatile, reactive, toxic inorg. compds. are conveniently handled by gas chromatography for both identification and separation. The volatile hydrides of Si and Ge, prepared by the hydrolysis of an alloy of Mg with Si and (or) Ge, are readily separated and identified by this technique used in combination with vapor pressure measurements, mass spectrometry, nuclear magnetic resonance, infrared, and mol. weight detns. for verification. As the number of atoms in the straight chain silanes, germanes, and silicogermanes increases regularly, the retention time increases. The branched chain isomers have slightly lower retention times as is true for hydrocarbons. A short **review** of active inorg. column materials is given. 17 references.

=> glycosylation (3a) purification

L13 81 GLYCOSYLATION (3A) PURIFICATION

=> dup rem l13

PROCESSING COMPLETED FOR L13

L14 48 DUP REM L13 (33 DUPLICATES REMOVED)

=> d

L14 ANSWER 1 OF 48 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1

AN 2006:9832 BIOSIS

DN PREV200600000143

TI Production, crystallization and X-ray characterization of chemically glycosylated hen egg-white lysozyme.

AU Lopez-Jaramillo, F. J. [Reprint Author]; Perez-Banderas, F.; Hernandez-Mateo, F.; Santoyo-Gonzalez, F.

CS UGRA, Fac Ciencias, CSIC, Inst Andaluz Ciencias Tierra, Lab Estudios Cristallog, Campus Fuentenueva, Granada 18002, Spain
javier@lec.ugr.es

SO Acta Crystallographica Section F Structural Biology and Crystallization Communications, (APR 2005) Vol. 61, No. Part 4, pp. 435-438.
ISSN: 1744-3091. E-ISSN: 1744-3091.

DT Article

LA English

ED Entered STN: 14 Dec 2005

Last Updated on STN: 14 Dec 2005

=> l14 and (reaction or nucleophilic or nucleophile)

L15 6 L14 AND (REACTION OR NUCLEOPHILIC OR NUCLEOPHILE)

=> d ibib abs total

L15 ANSWER 1 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:9832 BIOSIS

DOCUMENT NUMBER: PREV200600000143

TITLE: Production, crystallization and X-ray characterization of chemically glycosylated hen egg-white lysozyme.

AUTHOR(S): Lopez-Jaramillo, F. J. [Reprint Author]; Perez-Banderas,

CORPORATE SOURCE: F.; Hernandez-Mateo, F.; Santoyo-Gonzalez, F.
UGRA, Fac Ciencias, CSIC, Inst Andaluz Ciencias Tierra, Lab
Estudios Cristallog, Campus Fuentenueva, Granada 18002,
Spain
javier@lec.ugr.es

SOURCE: Acta Crystallographica Section F Structural Biology and
Crystallization Communications, (APR 2005) Vol. 61, No.
Part 4, pp. 435-438.
ISSN: 1744-3091. E-ISSN: 1744-3091.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 14 Dec 2005
Last Updated on STN: 14 Dec 2005

AB The crystallization of glycoproteins is one of the challenges to be
confronted by the crystallographic community in the frame of what is known
as glycobiology. The state of the art for the crystallization of
glycoproteins is not promising and removal of the carbohydrate chains is
generally suggested since they are flexible and a source of heterogeneity.
In this paper, the feasibility of introducing glucose into the model
protein hen egg-white lysozyme via a **post-purification
glycosylation reaction** that may turn any protein into a
model glycoprotein whose carbohydrate fraction can be manipulated is
demonstrated.

L15 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 2003:213471 BIOSIS

DOCUMENT NUMBER: PREV200300213471

TITLE: Evaluation of phenylboronate agarose for industrial-scale
purification of erythropoietin from mammalian cell
cultures.

AUTHOR(S): Zanette, Dino; Soffientini, Adolfo; Sottani, Cristina;
Sarubbi, Edoardo [Reprint Author]

CORPORATE SOURCE: Protein Production, Aventis Pharma, 102 route de Noisy,
93235, Romainville, France
edoardo.sarubbi@aventis.com

SOURCE: Journal of Biotechnology, (20 March 2003) Vol. 101, No. 3,
pp. 275-287. print.
ISSN: 0168-1656 (ISSN print).

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 30 Apr 2003
Last Updated on STN: 30 Apr 2003

AB The search for novel, cost-effective ways to produce erythropoietin (Epo),
the world top-selling biopharmaceutical, is a major challenge for today's
biotechnology industry. However, Epo's high glycosylation content (almost
40% of total mass) and the requirement for sialic acid for optimal in vivo
activity still make mammalian cells the expression system of choice. In
contrast to the abundance of reports on Epo production, robust,
cost-effective methods for large-scale Epo purification can hardly be
found in literature. To fill this gap, we describe here a process
specifically studied for industrial-scale purification of the protein.
Our method is based on the ability of phenylboronate agarose (PBA) to form
reversible complexes with 1,2-cis-diol-containing molecules, like sugars
in glycoproteins. Finding that additional factors (i.e., ionic and
hydrophobic interactions) contribute to the Epo-PBA binding
reaction, chromatography conditions have been optimized in
scale-down experiments to improve selectivity and yield. As a result, the
high performance of affinity chromatography has been achieved using a
support possessing the robustness, chemical stability and low cost of a
small synthetic ligand. By adding an anion exchange chromatography step
and gel filtration for polishing, a pure and active product can easily be
obtained by an integrated, start-to-end process optimized for
industrial-scale operations.

ACCESSION NUMBER: 2000:489754 BIOSIS
DOCUMENT NUMBER: PREV200000489875
TITLE: Prokaryotic expression, purification, and reconstitution of biological activities (antiprotease, antitumor, and heparin-binding) for tissue factor pathway inhibitor-2.
AUTHOR(S): Rao, C. N. [Reprint author]; Reddy, Prasad; Reeder, Dennis J.; Liu, Yueying; Stack, Sharon M.; Kisiel, W.; Woodley, David T.
CORPORATE SOURCE: Center for Prostate Disease Research, 1530 East Jefferson Street, Rockville, MD, 20852, USA
SOURCE: Biochemical and Biophysical Research Communications, (October 5, 2000) Vol. 276, No. 3, pp. 1286-1294. print. CODEN: BBRCA9. ISSN: 0006-291X.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Nov 2000
Last Updated on STN: 10 Jan 2002

AB We report the expression of tissue factor pathway inhibitor-2 (TFPI-2) (also known as PP-5, placental protein-5; MSPI, matrix-associated serine protease inhibitor) in *E. coli* as a 25-kDa nonglycosylated protein with a glycine substituted for aspartic acid at the amino terminus. High-level expression of TFPI-2 was obtained with pRE1 expression vector under the transcriptional and translational controls of the lambdaPL promoter and lambdaclII ribosome-binding site, respectively, with ATG initiation codon. TFPI-2 was produced as inclusion bodies and accounted for 25-30% of the total *E. coli* proteins. The inclusion bodies containing TFPI-2 were solubilized with urea, sulfitolyzed, purified, and refolded through a disulfide interchange **reaction**. The refolded *E. coli* TFPI-2 inhibited plasmin with an inhibition constant (K_i) of 5 nM that is similar with the TFPI-2 expressed in a mammalian system. The refolded *E. coli* TFPI-2 bound heparin and also inhibited plasmin, regardless of whether the enzyme was in the fluid phase or was bound to the membranes of HT-1080 fibrosarcoma cells. In addition, refolded *E. coli* TFPI-2 inhibited radiolabeled matrix degradation and Matrigel matrix invasion by HT-1080 fibrosarcoma cells and B16-F10 melanoma cells. Together, our results suggest that glycosylation is not essential for antiprotease, antitumor, and matrix-binding activities of TFPI-2. Based on these collective data, we conclude that a biologically active nonglycosylated TFPI-2 can be produced in *E. coli* and that the protein can be produced in high-enough quantities to conduct in vivo studies for determination of the role of this inhibitor in tumor invasion and metastasis.

L15 ANSWER 4 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:352832 BIOSIS
DOCUMENT NUMBER: PREV200000352832
TITLE: **Glycosylation** of macrolide antibiotics.
Purification and kinetic studies of a macrolide glycosyltransferase from *Streptomyces antibioticus*.
AUTHOR(S): Quiros, Luis M.; Carbajo, Rodrigo J.; Brana, Alfredo F.; Salas, Jose A. [Reprint author]
CORPORATE SOURCE: Departamento de Biologia Funcional, Universidad de Oviedo, 33006, Oviedo, Spain
SOURCE: Journal of Biological Chemistry, (April 21, 2000) Vol. 275, No. 16, pp. 11713-11720. print. CODEN: JBCHA3. ISSN: 0021-9258.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Aug 2000
Last Updated on STN: 8 Jan 2002

AB The *oleD* gene has been identified in the oleandomycin producer *Streptomyces antibioticus* and it codes a macrolide glycosyltransferase that is able to transfer a glucose moiety from UDP-glucose (UDP-Glc) to many macrolides. The glycosyltransferase coded by the *oleD* gene has been purified 371-fold from a *Streptomyces lividans* clone expressing this protein. The **reaction** product was isolated, and its structure

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	76155	glycopeptide or glycoprotein or glycosylation or glycosilated	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/21 14:22
L2	2221	beta near3 elimination	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/21 14:24
L3	443	I1 and I2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/21 14:27
L4	357	I1 and I2 and (thiol or amine or hydroxy or hydroxyl)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/21 14:28
L5	370	I1 and I2 and (thiol or amine or hydroxy or hydroxyl or nucleophile or nucleophilic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/21 14:29
L6	181	I1 and I2 and (thiol or amine or hydroxy or hydroxyl or nucleophile or nucleophilic) and resin	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/21 14:37
L7	177	I1 and I2 and (thiol or amine or hydroxy or hydroxyl or nucleophile or nucleophilic) and resin and (separation or purification or chromatography)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/21 14:38